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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/587,168	07/25/2006	Christian Eckelt	293260US6PCT	7274
22850 7590 05/29/2009 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER HUJAZ, OMAR F				
ART UNIT 3633		PAPER NUMBER		
NOTIFICATION DATE 05/29/2009		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

### Office Action Summary

**Application No.**

10/587,168

**Applicant(s)**

ECKELT ET AL.

**Examiner**

OMAR HIJAZ

**Art Unit**

3633

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 24-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 July 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date 07/25/2006
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This communication is a first Office Action Non-Final rejection on the merits. Preliminary amendment received on 07/25/2006 has been acknowledged. Claims 1-23 have been cancelled and claims 24-46 have been added. Claims 24-46 are now pending and have been considered below.

#### ***Claim Objections***

1. Claim 43 is objected to because of the following informalities:

As per claim 43, the preamble recites "as claimed in claim 43". This is inappropriate. The claim has been examined as though it is referring back to claim 42 instead.

#### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 24-46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 24, at lines 3-5, the recitations "which succeed one another in a direction of extension, partially overlapping in contiguous edge regions in perpendicular projection on faces of the glazing elements" renders the claim indefinite because it is unclear as to how which edge regions are being referred to and as to what is being referred to as "perpendicular projections".

As per claim 25, at lines 2-3, the recitation "defined by the thickness of individual glazing elements" and "and where necessary of at least one intermediate layer" renders the claim indefinite because the wording is unclear and indeterminate.

As per claim 28, at line 2, the recitation "one recessed rim belongs in common" renders the claim indefinite because it is unclear what is meant by "belongs in common".

As per claim 31, it is unclear as to how one glazing element can have "two projecting rims" but only "one recessed rim".

As per claim 37, at lines 3 and 5, the recitation "the sleeve in precise adjustment" renders the claim indefinite because it is unclear and the recitation "rotate relative to one another" renders the claim indefinite because it is unclear as to what is being referred to as "another".

As per claim 39, at lines 1 and 3, the recitations "the end washers" and "the tightening or screwing" render the claim indefinite because they lack antecedent basis.

As per claims 42 and 43, at lines 1-2, the recitation "the end washers" lacks antecedent basis.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 24-31 and 33, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Woll et al. (U.S. Patent No. 6,280,826).

As per claim 24 Woll et al. teaches an assembly device for at least two laminated glazing elements (abstract) each including plural individual glazing elements (glass panes 1, 3, and 5) that are rigid (glass is rigid) and assembled to one another at a surface by bonding layers (laminates 2 and 4), which succeed one another in a direction of extension, partially overlapping in contiguous edge regions in perpendicular projection on faces of the glazing elements (as illustrated, the panes are partially overlapping at the edges; figure 1), and are assembled to one another in this partially overlap region on an edge side (as illustrated, the panes are assembled to one another; figure 1), wherein only one portion of the rigid glazing elements, at least one individual glazing element of each laminated glazing element, extends into the overlap region (as illustrated, only a portion of each panes extend into the overlapping region; figure 1).

As per claim 25 Woll et al. teaches a thickness of the overlap region, defined by the thicknesses of the individual glazing elements extending into the overlap region and where necessary of at least one intermediate layer, does not exceed in total the thickness of an individual laminated glazing element (as illustrated, the thickness of the overlap region is defined by the thickness of the panes and the thickness of an individual pane does not exceed the thickness of the overlap region; figure 1).

As per claim 26 Woll et al. teaches each laminated glazing element includes rims edge to edge contiguous (as illustrated, the edges of elements 3 and 4 are contiguous

in the overlap region; figure 1) and offset one from the other in the direction of extension (as illustrated, the rims or edges are offset in the direction of extension; figure 1).

As per claim 27 Woll et al. teaches each laminated glazing element comprises in the edge region at least one individual glazing element which protrudes with one projecting rim and at least one individual glazing element with one recessed rim (as illustrated, some of the rims protrude and some are recessed; figure 1).

As per claim 28 Woll et al. teaches one projecting rim and/or one recessed rim belongs in common to plural individual glazing elements assembled to one another at the surface (as illustrated, some of the protruding and recessed elements are common at the surface; figure 1).

As per claim 29 Woll et al. teaches when looking in the direction of extension, a projecting rim of a second laminated glazing element follows a recessed rim of a first laminated glazing element (figure 1).

As per claim 30 Woll et al. teaches two rims offset relative to one another form a staggered formation on the side of the edge of the laminated glazing element (figure 1).

As per claim 31 Woll et al. teaches on one laminated glazing element, there are provided at least two projecting rims (1 and 4) and at least one recessed rim situated between the latter (3) and on the other laminated glazing element (5) at least one projecting rim (5) and at least two recessed rims (3, 4), in which the laminated glazing elements comprise at least three individual glazing elements (figure 1).

As per claim 33 Woll et al. teaches in the overlap region, one intermediate bonding layer (2) is provided between the faces of two successive laminated glazing elements (figure 1).

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 32, 34-39, and 44-46, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Woll et al. (U.S. Patent No. 6,280,826) in view of Demars et al. (U.S. Patent No. 6,138,434).

As per claims 32 and 34, Woll et al. fails to disclose at least one mechanical assembly member with at least one through-hole passing through combining successive laminated glazing elements is provided.

Demars et al. discloses a glazed element (abstract) with a mechanical assembly 12 through successive glass sheets, whereby the mechanical assembly passes through a hole in the glass (col. 4, lines 65-68).

Therefore from the teaching of Demars et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the glazing assembly of Woll et al. to include a mechanical assembly passing through a hole in the glass as taught by Demars et al. in order to attach multiple adjacent glazing elements for a larger view port.

As per claims 35-36, Woll et al. in view of Demars et al. discloses means for centering its longitudinal axis passing through the laminated glazing elements in the through-hole; wherein the assembly member is centered fixedly on the axis of a hole of a first individual glazing element of a first laminated glazing element, and comprises means for compensating for off-center positionings of a hole of a second individual glazing element, belonging to another laminated glazing element outside the axis (col. 4, lines 65-68 and col. 5, lines 1-4).

As per claim 37, Woll et al. in view of Demars et al. discloses at least one rod or one sleeve configured to be inserted in the through-hole (threaded member extending through the hole and mechanical assembly 12; figure 2a), one centering ring (cylindrical ring surrounding the threaded member; figure 2a) surrounding the rod or the sleeve in precise adjustment and configured to be adjusted in a hole of an individual glazing element (figure 12), and at least one eccentric ring (14) configured to rotate relative to one another (col. 5, lines 5-10), which also surround the rod or the sleeve in precise adjustment and are configured to be adjusted in a hole of another individual glazing element (figure 12).

As per claim 38, Woll et al. in view of Demars et al. discloses end washers to mask the through-hole on the outside (washers 15 and 16).

As per claim 39, Woll et al. in view of Demars et al. discloses the end washers may be tightened with the rod or the sleeve, in which device the rod or the sleeve is immobilized in its axial direction in the through-hole after the tightening or screwing of the two end washers (col. 5, lines 4-10).



As per claim 44, Woll et al. fails to disclose the individual glazing elements extending into the overlap region are made of partially prestressed or prestressed glass.

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use prestressed glass with the glazing assembly since it has been held to be within the general skill of a worker in the art to select a material on the basis of its suitability for the intended use as a matter of obvious design choice, and prestressed glass provides for a stronger glazing assembly.

As per claim 45, Woll et al. in view of Demars et al. discloses at least two laminated glazing elements assembled to one another with aid of one or more assembly members (figure 1).

As per claim 46, Woll et al. in view of Demars et al. discloses a facade comprising a plurality of glass glazing elements attached to a framework, while being situated in a plane, which is reinforced transversely on this plane against acting forces by at least one construction module (figure 1).

8. Claim 40, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Woll et al. (U.S. Patent No. 6,280,826) in view of Demars et al. (U.S. Patent No. 6,138,434) and further in view of Kreyenborg et al. (U.S. Patent No. 6,623,203).

As per claim 40, Woll et al. in view of Demars et al. discloses the end washers are applied flat on the laminated glazing elements about exits of the through-hole.

The Woll et al. and Demars et al. combination fails to disclose intermediate shims.

Kreyenborg et al. discloses a clamp fixture to fasten glass plates (abstract) with shims 19 (col. 5, lines 40-50).

Therefore from the teaching of Kreyenborg et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the glazing assembly of the Woll et al. and Demars et al. combination to include shims in the glass assembly as taught by Kreyenborg et al. in order to properly tighten and secure the glass element without further damage to the glass.

9. Claim 41, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over Woll et al. (U.S. Patent No. 6,280,826) in view of Demars et al. (U.S. Patent No. 6,138,434) and further in view of Chae et al. (U.S. Patent No. 6,430,894).

As per claim 41, Woll et al. in view of Demars et al. fails to disclose, remaining hollow spaces are filled with a mass of filler.

Chae et al. discloses mechanical assembly for a glazing unit (abstract) whereby a filler is inserted into empty spaces (col. 5, lines 10-15).

Therefore from the teaching of Chae et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the glazing assembly of the Woll et al. and Demars et al. combination to include a filler sealant in the glass empty spaces assembly as taught by Chae et al. in order to avoid ingress of moisture.

10. Claims 42 and 43, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Woll et al. (U.S. Patent No. 6,280,826) in view of Demars et al.

(U.S. Patent No. 6,138,434) in view of Chae et al. (U.S. Patent No. 6,430,894) and further in view of Lind (U.S. Pub. No. 2003/0138307).

As per claims 42 and 43, Woll et al. in view of Demars and Chae et al. fails to disclose the end washers comprise orifices for insertion of the mass of filler and to discharge air displaced by the inserted mass of filler.

Lind discloses a fixing element with a washer 18 which has injection opening 22 in order to fill the assembly with a sealing compound (abstract).

Therefore from the teaching of Lind, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the glazing assembly of the Woll et al., Demars et al., and Chae et al. combination to include a filler hole in the fixing element assembly as taught by Lind in order to fill the assembly with a filler to avoid ingress of moisture.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lin (U.S. Patent No. 7,155,869) discloses a fixing for a single glazing, with a mechanical device.

Wildenhain (U.S. Patent No. 7,155,869) discloses a fixing for a composite glazing, with a mechanical connector assembly.

Elmer (U.S. Patent No. 6,796,091) discloses a glass façade with a mechanical assembly joining multiple glazing elements.

Harry (U.S. Patent No. 3,765,140) discloses panel elements overlapping and joined together by a fastening device.

Labock (U.S. Patent No. 5,326,606) discloses panels face to face with an overlapping region.

Ringle (U.S. Patent No. 2,256,104) discloses panel elements overlapping and joined together by a fastening device.

DeVore (U.S. Patent No. 5,802,793) discloses a composite set of panels which overlap one another in offset regions.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OMAR HIJAZ whose telephone number is (571)270-5790. The examiner can normally be reached on Mon-Fri 9:30 a.m. - 7:00 p.m. (alternating Fridays).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Glessner can be reached on (571)272-6754. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

O FH

/Brian E. Glessner/

Primary Examiner, Art Unit 3633